DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit No.: AQ0264MSS03 **Final - June 6, 2008**
Rescinds Permit No.: AQ0264MSS01

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit No. AQ0264MSS03 to the Permittee listed below.

Permittee:	**United States Air Force** 2310 Central; Avenue, Suite 100 Eielson AFB, AK 99702-2299 (907) 377-5213
Owner/Operator:	Same as Permittee
Stationary Source:	**Eielson Air Force Base**
Location:	Latitude: 64° 41' North; Longitude: 147° 05' West
Physical Address:	23 road miles south of Fairbanks, AK
Permit Contact:	Katherine Stringham, (907) 377-3313 e-mail: katherine.stringham@eielson.af.mil
Project:	Portable Asphalt/Rock Crusher

This project is classified under 18 AAC 50.502(b)(3) for construction, operation, or relocation of a stationary source containing a rock crusher with a rated capacity of at least five tons per hour, under 18 AAC 50.508(5) for a new Owner Requested Limit to avoid minor permitting, and under 18 AAC 50.508(6) to revise or rescind terms and conditions of a Title I permit. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 9 except as specified in this permit.

The Permittee may operate under the terms and conditions of this permit upon issuance.

Sally A. Ryers

for John F. Kuterbach
Manager, Air Permits Program

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Section 1 Emission Unit Inventory

1. **Authorization.** The Permittee is authorized to install and operate the emission units listed in Table 1 at the following locations at Eielson Air Force Base (EAFB): asphalt pile, Mullins Pit, and Cathers Lake, subject to terms and conditions of this permit.

Table 1 – Minor Permit Emission Unit Inventory[a]

Unit No.	Type	Description	Rating/ Size	Installation (Year)
62		Removed		
63		Removed		
64	Crusher	Cobra 1000 Recycling Plant	150 tph	2007
65	Conveyor Transfer Point	Transfer Point (Recycling Plant to Superior Stackable Conveyor)	150 tph	2007
66	Conveyor Transfer Point	Transfer Point (Superior Stackable conveyor to 683 Hydrascreen	150 tph	2007
67	Screening	Findlay 683 Hydrascreen	150 tph	2007
68	Conveyor Transfer Point	Transfer Point (683 Hydrascreen to Oversize Return Conveyor Belt)	50 tph	2007
69	Conveyor Transfer Point	Transfer Point (Oversize Conveyor Belt Return to Cobra 1000 Recycle Plant)	50 tph	2007
70	Conveyor Transfer Point	Transfer Point (683 Hydrascreen to Second Deck Oversize Return Conveyor Belt)	50 tph	2007
71	Fines Screening	683 Hydrascreen Fines Screen	100 tph	2007
72	Conveyor Transfer Point	Transfer Point (Fines Screen to Fines Belt)	100 tph	2007
73	Conveyor Transfer Point	Transfer Point (Fines Belt to Superior Radial Stacking Conveyor)	100 tph	2007
74	Conveyor Transfer Point	Transfer Point (Conveyor Discharge onto Asphalt Pile)	100 tph	2007
75	Reciprocating Engine	Recycle Plant Engine (John Deere 6125H)	450 hp	2007
76	Reciprocating Engine	683 Hydrascreen Engine (Duetz BF 4 M 2012), 2,500 rpm	100 hp	2007
77	Jaw Crusher Feed	Jaw Crusher Dump Point	150 tph	2008
78	Conveyer Transfer Point	Transfer Point (Jaw Crusher Screen to Superior Conveyer # 1)	100 tph	2008
79	Conveyer Transfer Point	Transfer Point (Superior Conveyer # 1 to Superior Conveyer # 2)	100 tph	2008
80	Conveyer Transfer Point	Transfer Point (Superior Conveyer # 2 discharge on to Asphalt Stockpile)	100 tph	2008
81	Crusher	Jaw Crusher	150 tph	2008
82	Conveyer Transfer Point	Transfer Point (Jaw Crusher Conveyer to Recycling Plant Feed Conveyor)	150 tph	2008
83	Conveyer Transfer Point	Transfer Point (Jaw Crusher Conveyer to Cobra 1000 Recycling Plant)	150 tph	2008
84	Jaw Crusher Engine	John Deere 6125H Diesel Engine	450 hp	2008

[a] The listed emission units have specific monitoring, recordkeeping, or reporting conditions in this minor permit. The description and rating are given for identification purposes only.

[b] tph means tons per hour, rpm means revolutions per minute.

Section 2 Assessable Emissions

2. Upon issuance of this minor permit, Condition 1 of Operating Permit No. AQ0246TVP01 is rescinded and replaced by the following.

1. Assessable Emissions. The Permittee shall pay to the Department an annual emission fee based on the source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

1.1 the source's assessable potential to emit of 4,076 tpy; or

1.2 the source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by:

a an enforceable test method described in 18 AAC 50.220;

b material balance calculations;

c emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d other methods and calculations approved by the Department.

Section 3 Emission Unit-Specific Requirements

State Emission Standards for Asphalt/Rock Crusher

3. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Emission Units 64 through 74 and 77 through 83 listed in Table 1 to reduce visibility through the exhaust by more than 20 percent averaged over any six consecutive minutes.

   3.1 Conduct visible emission surveillance for each Emission Unit 64 through 74 and 77 through 83 listed in Table 1 as follows.

      a. Observe exhaust following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations, and as follows.

         (i) Select an observer position that is a minimum of 15 feet from the emission unit.

         (ii) When possible, select an observer position that minimizes interference from other fugitive emissions sources, while maintaining the observer position relative to the sun required by Method 9.

         (iii) If water mist is present, make the observation at a point in the plume where the mist is no longer visible.

      b. Conduct the observation at a load typical of the maximum operation during the reporting period described in condition 21:

      c. Conduct the observations

         (i) within two days of initial startup, if not already conducted;

         (ii) within two days after startup at each new location; and

         (iii) at least once in every 30 days of operation at the same location.

   3.2 Include the results of visible emissions observations with the operating report described in condition 21.

4. **Particulate Matter.** The Permittee shall not cause or allow particulate matter (PM) emitted from Emission Units 64 thorough 74 and 77 through 83 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

State Emission Standards for the Diesel Engines

5. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Emission Units 75, 76, and 84 listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

    5.1 Conduct on-going visible emission monitoring for Emission Units 75, 76 and 84 according to condition 34.

    5.2 Record, and report visible emissions monitoring as described in conditions 35 and 36.

Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from Emission Units 75, 76 and 84 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. For Units 75, 76 and 84, monitor, record, and report PM emissions as described in Section 8.

6. **Sulfur Compound Emissions.** The Permittee shall not allow sulfur emissions, expressed as SO_2, from Emission Units 75, 76 and 84 to exceed 500 parts per million (ppm) over three hours.

    6.1 For each shipment of fuel:

        a. if the fuel grade requires a sulfur content less than 0.5 percent by weight (wt%), keep receipts that specify fuel grade and amount; or

        b. if the fuel grade does not require a sulfur content less than 0.5 wt%, keep receipts that specify fuel grade and amount, and

            (i) test the fuel for sulfur content using an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the Department; or

            (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery, the test results must include a statement signed by the supplier or refinery of what fuel they represent.

    6.2 If a load of fuel contains greater than 0.75 wt%S, the Permittee shall calculate SO_2 emissions in ppm using either material balance calculations included in Attachment 4 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

    6.3 Reporting.

a. If SO_2 emissions calculated under condition 6.2 exceed 500 ppm, report as excess emissions under condition 20. When reporting under this condition 6.3, include the calculation under condition 6.2.

b. Include in the report required by condition 21

(i) a list of the fuel grades received at the stationary source during the reporting period;

(ii) for any grade with a maximum fuel sulfur greater than 0.5 wt%, the fuel sulfur of each shipment; and

(iii) for fuel with a sulfur content greater than 0.75 wt%, the calculated SO_2 emissions in ppm.

PSD Significant Modification and Minor Permit Avoidance Requirements for NO_X

7. **Permit Classification Avoidance Limits.** The Permittee shall

a. limit Units 75 and 76 to 4,000 hrs per 12 consecutive months, each, for PSD modification avoidance; and

b. limit Unit 84 to 4,000 hours per 12 consecutive months for PSD modification avoidance and to avoid minor permit classification under 18 AAC 50.502(c)(3).

7.1 Install and operate a dedicated continuous monitoring system for recording operating hours for each unit that is accurate to within five percent.

7.2 Monitor and record monthly the operating hours for each unit separately.

7.3 No later than 15th of each month, add the monthly operating hours for each Unit 75, 76 and 84 to the total for the previous 11 months, to get the 12 month total for each unit.

7.4 If the 12 month total in condition 7.3 exceeds 4,000 for any of the units 75, 76, or 84, report as excess emissions under condition 20.

7.5 Include the records and calculations required under conditions 7.2 and 7.3 in the report required by condition 21.

Ambient Air Quality Protection Requirements

8. **Location.** The Permittee shall not operate the asphalt/rock crusher at a location

8.1 within 400 feet of any occupied building that can be accessed by the general public;[1]

8.2 within 1,000 feet of a building used for residential or temporary lodging purposes; or

8.3 within 1,000 ft of any access road that constitutes ambient air.

9. Apply wet suppression methods (i.e. spray nozzles) to Units 64 through 74 and 77 through 83. Monitor using visual observations to ensure that dust is continuously controlled (i.e. apply more water rock crusher operations are generating dust at any time).

10. For operations in locations other than the following locations at EAFB described in Appendix E of the application: asphalt pile, Mullins Pit, and Cathers Lake, the Permittee shall

10.1 provide notice to the Department at least 10 days in advance of the move of any crusher operation by using the Application Addendum (Location Change) in Attachment 3 of this permit; and

10.2 give adequate consideration to siting issues as described in condition 11 when operating or changing locations of a crusher permitted to operate under this permit.

11. In addition to complying with condition 8 if the operator selects a location near residences or other occupied structures that can be accessed by the general public[2] and this location selection results in complaints concerning the air emissions, the Department will investigate the complaints. These investigations could result in

11.1 the operator being required to prove, by air quality dispersion modeling or other means, that emissions from the crusher are not harmful to the neighbors by conducting an ambient air quality investigation under 18 AAC 50.201;

11.2 the requirement to reduce emissions or implement another control strategy to reduce the ambient impact of those emissions as necessary to ensure that the concentration of air pollutants in the ambient air does not exceed the ambient air quality standards, maximum allowable ambient concentrations or the limitations of 18 AAC 50.110;

11.3 air quality monitoring investigations;

11.4 the requirement to obtain a site-specific permit with requirements tailored to the exact operation contemplated; and

11.5 operators must be aware that if additional dispersion modeling, an investigation under 18 AAC 50.201 or a site-specific permit is needed, these requirements could result in significant delays and expenses.

[1] In this permit "general public" includes families and guests of base personnel.
[2] See footnote 1.

12. **Signage.** The Permittee shall erect signs at locations that are 400 feet or more away from the asphalt/rock crusher while operating, indicating that

    12.1 the EAFB commander has ordered that only personnel that are either operating or supporting the crusher can proceed beyond the signs,

    12.2 any person who proceeds beyond the sign will be escorted from the area by crusher operators; and

    12.3 personnel who continue to violate the crusher exclusion zone will be escorted from the area by Air Force Security Forces.

Maintenance Requirements for Asphalt/Rock Crusher and Diesel Engines

13. **Maintenance.** For Units 64 through 84 listed in Table 1, the Permittee shall

    13.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

    13.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in an electronic format; and

    13.3 keep a copy of either manufacturer's or the operator's maintenance procedures.

Section 4 Stationary Source-Wide Requirements

14. **Fugitive Dust.** The operator shall take reasonable precautions to prevent the release of airborne PM and fugitive dust from aggregate piles, conveyors and elevators, loading locations, crushers, screens, vehicle traffic within the stationary source boundary or within the area described in condition 8.2, and other sources of fugitive dust.

    14.1 Reasonable precautions for asphalt/rock crushers to prevent PM from becoming airborne include, as necessary:

        a. installation and use of hoods;

        b. fans and dust collectors to enclose and vent dusty materials;

        c. other covers and enclosures to prevent generation or release of fugitive dust;

        d. cleanup of loose material on work surfaces;

        e. minimizing drop distances on conveyor systems and lowering loader buckets to be in contact with the surface of the soil or ground before dumping;

        f. application of water or suitable chemicals to road surfaces to prevent the generation of fugitive dust;

        g. gratings at the exit of the stationary source to prevent tracking of dirt or mud onto public roads;

        h. for a crusher operation located near a business, residence, or other occupied structure, if the wind is blowing toward the structure and emissions from an activity would result in a violation of condition 15, stopping the activity that would cause the violation while the wind blows in that direction.

    14.2 **Dust Control Plans.** If a location listed in an application or an application addendum (Attachment 3 of this permit) is within 2,000 feet of the nearest inhabited offsite structure the applicant or Permittee must attach a fugitive dust control plan as part of that application or addendum. The Permittee must also submit a fugitive dust control plan, or revision to the plan if requested by the Department. The operator must comply with a plan required under this condition.

    The plan must be specific to any location named in a permit application or application addendum; say what measures will be taken and under what circumstances the Permittee will use them; and if necessary, identify the frequency with which measures will be applied. A plan does not fulfill this requirement if it only says what measures can be taken for a particular emission unit. The plan must identify how (specific actions) the Permittee will monitor to make sure that the precautions being used are adequate on an ongoing basis.

15. **Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

15.1 Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 20.

b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 15.

15.2 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 15; or

b. the Department notifies the Permittee that it has found a violation of condition 15.

15.3 The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons who complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 15; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

15.4 In each semi annual operating report, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

15.5 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

Section 5 General Recordkeeping, Reporting, and Compliance Requirements

16. **Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

17. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 16.

18. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

19. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

    19.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

    19.2 records of all monitoring required by this permit, and information about the monitoring including:

        a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

        b. sampling dates and times of sampling or measurements;

        c. the operating conditions that existed at the time of sampling or measurement;

        d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

20. **Excess Emissions and Permit Deviation Reports.**

20.1 Except as provided in condition 15, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in conditions 20.1c(ii) and 20.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 20.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

20.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Attachment 2 of this permit. The Permittee must provide all information called for by the form that is used.

20.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

21. **Operating Reports.** During the life of this permit, the Permittee shall submit to the Department an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year, and by February 1 for the period July 1 to December 31 of the previous year.

    21.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

    21.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 21.1, either

        a. The Permittee shall identify

            (i) the date of the deviation;

            (ii) the equipment involved;

            (iii) the permit condition affected;

            (iv) a description of the excess emissions or permit deviation; and

            (v) any corrective action or preventive measures taken and the date of such actions; or

        b. When excess emissions or permit deviations have already been reported under condition 20 the Permittee may cite the date or dates of those reports.

22. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

    22.1 enter upon the premises where a emission unit subject to the permit is located or where records required by the permit are kept;

    22.2 have access to and copy any records required by the permit;

    22.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

    22.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

Section 6 General Source Test Requirements

23. **Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

24. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

25. **Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 23 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

26. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

27. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 16. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

Section 7 Terms to Make Permit Enforceable

28. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

    28.1 an enforcement action; or

    28.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.

29. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

30. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

31. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

    31.1 included and specifically identified in the permit; or

    31.2 determined in writing in the permit to be inapplicable.

32. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

33. The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 8 Visible Emission and Particulate Matter Monitoring Plan for Diesel Engines

34. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of Emission Units 75, 76 and 84 for visible emissions using either the Method 9 Plan under condition 34.1 or the Smoke/No-Smoke Plan under condition 34.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by condition 34.3.

34.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. Observe exhaust for 18 minutes within six months after the issue date of this permit or within 14 calendar days after changing from the Smoke/No-Smoke Plan of condition 34.2, whichever is later.

b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.

34.2 **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.

b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.

c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 34.1 or perform the corrective action required under condition 34.3

34.3 **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 34.2, then the Permittee shall either follow the Method 9 plan of condition 34.1 or

a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;

b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. after completing the actions required under condition 34.3a,

(i) take Smoke/No Smoke observations in accordance with condition 34.2

(A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and

(B) continue as described in condition 34.2b; or

(ii) if the actions taken under condition 34.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 34.3c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 34.2a.

35. **Visible Emissions Record Keeping.** The Permittee shall keep records in accordance with this condition 35.

35.1 If using the Method 9 Plan of condition 34.1,

a. the observer shall record

(i) the name of the stationary source, emissions source and location, stationary source type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet included in Attachment 1;

(ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record included in Attachment 1; and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;

b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;

c. calculate and record the highest 18-consecutive-minute average observed.

35.2 If using the Smoke/No Smoke Plan of condition 34.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:

a. the date and time of the observation;

b. from Table 1, the number of the emission unit observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

36. **Visible Emissions Reporting.** The Permittee shall report visible emissions as follows:

36.1 include in each operating report under condition 21:

a. which visible-emissions plan of condition 34 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;

b. for each emission unit under the Method 9 Plan,

(i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or record keeping required under conditions 34 and 35 that was not done;

36.2 report under condition 20:

a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and

b. if any monitoring under condition 34 was not performed when required, report within three days of the date the monitoring was required.

37. **Particulate Matter Monitoring.** The Permittee shall conduct source tests on Emission Units 75, 76 and 84 to determine the concentration of PM in the exhaust of an emission unit in accordance with this condition 37.

37.1 Within six months of exceeding the criteria of condition 37.2a or 37.2b, either

a. conduct a PM source test as described in Section 13 of Operating Permit No. AQ0246TVP01; or

b. make repairs so that emissions no longer exceed the criteria of condition 37.2; to show that emissions are below those criteria, observe emissions as described in condition 34.1 under load conditions comparable to those when the criteria were exceeded.

37.2 Conduct the test according to condition 37.1 if

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

37.3 During each one hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one hour test run. Submit a copy of these observations with the source test report.

37.4 The automatic PM source test requirement in condition 37.1 and 37.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

38. **Particulate Matter Record Keeping.** Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameters of Emission Unit 75, 76 and 84. Report the stack diameters in the next operating report under condition 21.

39. **Particulate Matter Reporting.** The Permittee shall report as follows:

39.1 report under condition 20

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of condition 37.2 was exceeded and the Permittee did not comply with either condition 37.1a or 37.1b, this must be reported by the day following the day compliance with condition 37.1 was required;

39.2 report observations in excess of the threshold of condition 37.2b within 30 days of the end of the month in which the observations occur;

39.3 in each operating report under condition number 21, include

a. the dates, emission unit no., and results when an observed 18-minute average was greater than an applicable threshold in condition 37.2;

b. a summary of the results of any PM testing under condition 37; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 37.2, if they were not already submitted.

Section 9 Permit Documentation

June 2, 2008	e-mail from Kathy Stringham to Zeena Siddeek, attached initial visible emissions compliance demonstration for emission units authorized in permit AQ0264MSS01.
May 29, 2008	Comments to the public notice draft permit from USAF to ADEC. The comments included vendor emissions data for the reciprocating engines.
April 25, 2008	e-mail from Zach Mothershed to Zeena Siddeek to revise the ORLs for the new and existing engines to avoid PSD and minor permit applicability. The PTE in the application was based on Tier 2 emissions conformity for non road engines. The department did not agree with these emission factors and used AP-42 factors. USAF agreed to the revised ORLs.
March 6, 2008	e-mail from Kathy Stringham, EAFB to Zeena Siddeek (ADEC) with attached vendor data for engine Unit 75.
February 29, 2008	e-mail from Kathy Stringham (Eielson AFB) to Zeena Siddeek (ADEC) attached spread sheets with new numbering for emission units.
February 28, 2008	e-mail from Kathy Stringham (Eielson AFB) to Zeena Siddeek (ADEC) stating that emission units 62 and 63 listed in Permit No. AQ0264MSS01 will go away with the new configuration.
November 20, 2007	Minor Permit Application to Modify Permit No. AQ0264MSS01.
March, 2006	Minor Permit Application for the Asphalt/Rock Crusher.
June 5, 2006	Payment received for rock crusher application.
October 6, 2006	Email from Chris Menefee (Hoefler) to Bill Walker (Department) containing PM-10 increment modeling demonstration.
October 13, 2006	Email from Chris Menefee (Hoefler) to Sally Ryan, containing an application supplement.
October 30, 2006	Email from Chris Menefee (Hoefler) to Sally Ryan, containing an application supplement.
December 19, 2006	Letter from Jeffrey B. Putnam (USAF) to ADEC, containing comments on the preliminary permit.

Section 10 Attachments

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Attachment 1 - Visible Emissions Form

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Stationary Source: _____

Location: _____

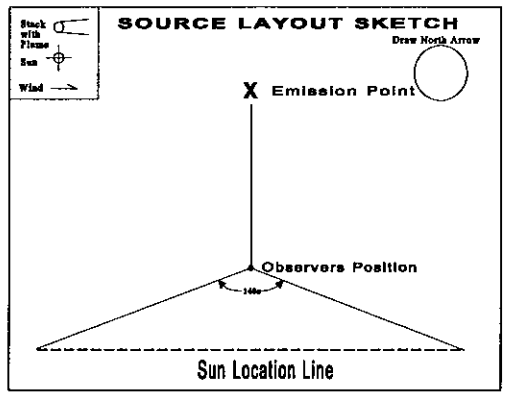
Test No.: _____ Date: _____

Source: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company & Stationary Source _____ Certified Observer _____

Test Number _____ Clock time _____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____

Observer Signature and Date Certified By and Date

Data Reduction:

Duration of Observation Period (minutes) _____ Duration Required by Permit (minutes) _____

Number of Observations _____ Highest Six –Minute Average Opacity (%) _____

Number of Observations exceeding 20 % _____

In compliance with three-minute aggregate opacity limit? (Yes or No) _____

In compliance with six-minute opacity limit? (Yes or No) _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Attachment 2 - ADEC Notification Form[1]

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

Stationary Source Name **Air Quality Permit Number**

Company Name

When did you discover the Excess Emissions/Permit Deviation?
Date: / / Time: :

When did the event/deviation?
Begin: Date: / / Time: : (please use 24hr clock)
End: Date: / / Time: : (please use 24hr clock)

What was the duration of the event/deviation: : (hrs:min) or days
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for notification: (please check only 1 box and go to the corresponding section)
☐ Excess Emissions Complete Section 1 and Certify
☐ Deviation from permit conditions complete Section 2 and certify
☐ Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

Section 1. Excess Emissions

(a) Was the exceedance ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up/Shut Down ☐ Natural Cause (weather/earthquake/flood)
☐ Control Equipment Failure ☐ Scheduled Maintenance/Equipment Adjustments
☐ Bad fuel/coal/gas ☐ Upset Condition ☐ Other

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emission unit(s) Involved:

Identify the emission units involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

[1] Revised as of December 6, 2004

EU ID	Emission Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (please check only one):

☐ Opacity % ☐ Venting (gas/scf) ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Record Keeping Failure
☐ Marine Vessel Opacity ☐ Failure to monitor/report ☐ Flaring
☐ Other:

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ YES ☐ NO
Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ YES ☐ NO

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) Permit Deviation Type (check one only) (check boxes correspond with sections in permit)

☐ Emission Unit Specific
☐ General Source Test/Monitoring Requirements
☐ Recordkeeping/Reporting/Compliance Certification
☐ Standard Conditions Not Included in Permit
☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Insignificant Emission Unit
☐ Stationary Source-Wide
☐ Other Section: (title of section and section # of your permit)

(b) Emission unit(s) Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding Permit condition and the deviation.

EU ID	Emission Unit Name	Permit Condition /Potential Deviation

(c) Description of Potential Deviation: Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions: Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:_____Title_____Date _____

Signature: _____Phone number_____

To Submit this report:

Fax this form to: 907-451-2187
Or
Email to: airreports@dec.state.ak.us
if emailed, the report must be certified.
Or
Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643
Or
Phone notifications: 907-451-5173.
Phone notifications require written follow up report within the deadline listed in condition 20.
Or
Online submission of this report can be made at the following website *(Website is not yet available). If submitted online, the report must be certified.*

_____ _____

Signature: Date

Attachment 3 - Application Addendum (Location Change)

Submit the information specified below to the Department's Air Permit Program Compliance Section, 610 University Avenue, Fairbanks, Alaska 99709-3643 *ten* days before moving the plant to any new location, and report the exact date before startup by telephone, fax, e-mail or letter.

Name of Firm: _____ Permit Number _____

Make and Model of the Equipment/Facility to be relocated _____

Contact Person: _____ Telephone: _____

New plant location (Street address, Milepost number etc. **Include site maps):**

_____

Approximate start-up and shut-down dates: _____

Distance from Plant boundary to nearest inhabited structure _____ yards

Nearest inhabited structures are on (check one) ___ flat or ___ elevated terrain

Attach approvals or conditional use permits from Borough where plant is to be located.

Comments: _____

I hereby certify that the information contained in this notification to the best of my knowledge and belief, is true, complete, and accurate. **I have taken the information in condition 8 into account in the site selection for this plant relocation.**

Signature: _____ Printed Name: _____

Title: _____ Telephone: _____

State of Alaska, City of _____, Borough of _____

On this _____day of _____, 20____ before me personally appeared _____

Whose identity was proved to me on the basis of satisfactory evidence to be the person
Whose name is subscribed to this instrument, and acknowledged that he (she) executed the same.

_____ _____

Notary Public My Commission Expires on

Attachment 4 – Material Balance Calculations

SO_2 Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 x [wt%S_{fuel}] = **31,200 x** _____ = _____
B = 0.148 x [wt%S_{fuel}] = **0.148 x** _____ = _____
C = 0.396 x [wt%C_{fuel}] = **0.396 x** _____ = _____
D = 0.933 x [wt%H_{fuel}] = **0.933 x** _____ = _____
E = B + C + D = _____ + _____ + _____ = _____
F = 20.9 – [vol%$_{dry}O_{2,\ exhaust}$] = **20.9 –** _____ = _____
G = [vol%$_{dry}O_{2,\ exhaust}$] **÷ F** = _____ ÷ _____ = _____
H = 1 + G = 1 + _____ = _____
I = E x H = _____ **x** _____ = _____

SO_2 concentration = **A ÷ I** = _____ ÷ _____ = _____ **PPM**

The wt%S_{fuel}, wt%C_{fuel}, **and** wt%H_{fuel} **are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.**

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 6. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%$_{dry}O_{2,\ exhaust}$) **is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.**

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations, not 0.01, and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.